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DOI:

[10.1093/ageing/afz082](https://doi.org/10.1093/ageing/afz082)

Document Version

Peer reviewed version

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Citation for published version (APA):

Lawrence, V., Kimona, K., Howard, R. J., Serfaty, M., Wetherell, J., Livingston, G., Wilkinson, P., Walters, K., Jones, R., & Gould, R. (2019). Optimising the acceptability and feasibility of Acceptance and Commitment Therapy for treatment-resistant generalised anxiety disorder in older adults. *Age and Ageing*, 48(5), 735-744. <https://doi.org/10.1093/ageing/afz082>

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Optimising the acceptability and feasibility of Acceptance and Commitment Therapy for treatment-resistant generalised anxiety disorder in older adults

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Acknowledgements:

The authors would like to express their gratitude and thanks to all of the participants who took part in the interviews and workshops, and the Patient and Public Involvement representatives who reviewed themes. This work was funded by the National Institute of Health Research (NIHR) Health Technology Assessment Programme (ref: 15/161/05). The views expressed are those of the authors and not necessarily those of the NHS, the NIHR or the Department of Health and Social Care. This research was supported by the NIHR Biomedical Research Centre at University College London and King's College London. RH is supported by the UCLH NIHR BRC

Abstract

Background: Generalised anxiety disorder (GAD) is common in later life with a prevalence of 3-12%. Many only partially respond to cognitive behavioural therapy or pharmacotherapy and can be classified as treatment resistant. These patients experience poor quality of life, and are at increased risk of comorbid depression, falls and loneliness. Acceptance and Commitment Therapy (ACT) is an emerging therapy, which may be particularly suited to this population, but has not been tailored to their needs.

Objectives: To optimise the acceptability and feasibility of ACT for older adults with treatment-resistant GAD.

Design: A person-based approach to ground the adapted ACT intervention in the perspectives and lives of those who will use it.

Methods: First, we conducted qualitative interviews with 15 older adults with GAD and 36 healthcare professionals to develop guiding principles to inform the intervention. Second, we consulted service users and clinical experts and interviewed the same 15 older adults using “think aloud” techniques to enhance its acceptability and feasibility.

Results: In Stage 1, older adults’ concerns and needs were categorised in four themes: “Expert in one’s own condition”, “Deep seated coping strategies”, “Expert in therapy” and “Support with implementation”. In Stage 2, implications for therapy were identified that included an early focus on values and ACT as a collaborative partnership, examining beliefs around “self as worrier” and the role of avoidance, validating and accommodating individuals’ knowledge and experience and compensating for age-related cognitive changes.

Discussion: Our systematic approach combined rigour and transparency to develop a therapeutic intervention tailored to the specific needs of older adults with treatment-resistant GAD.

Key words: Anxiety, Qualitative, Co-morbidity, Acceptance and Commitment Therapy, Intervention development

Introduction

Generalised anxiety disorder (GAD) is the most common anxiety disorder in older adults with prevalence rates ranging from 3.1% to 11.2% (1). Characterised by a tendency to worry, it is associated with distress, poor quality of life, social isolation, increased disability and greater healthcare utilisation (2). It is a condition that may persist for decades with a mean symptom duration of 20 to 30 years in older adults across community, medical, and mental health samples in multiple countries (3, 4). Current National Institute for Health and Clinical Excellence guidelines for adults of any age recommend psychotherapy (that is, cognitive behavioural therapy [CBT] or applied relaxation) and pharmacotherapy as treatments for GAD (5), but a large proportion of older adults are 'treatment resistant', that is fail to respond adequately to these interventions. There is insufficient evidence at present to recommend an alternative form of treatment for GAD in older adults, though this is clearly needed.

The older adult population is projected to increase rapidly in the next 40 years (6), yet there is a stark lack of evidence to guide the management of older adults with 'treatment-resistant' GAD whose symptoms persist beyond first-line treatment (7). Many are in receipt of multiple drug treatments, including benzodiazepines and other psychotropic drugs which may increase the risk of falls and the likelihood of delirium (8). Meanwhile offering the same conventional psychotherapy to those who have not responded to it is likely to be ineffective and frustrating for the patient and clinician. Developing treatment strategies that are acceptable and effective for older adults with treatment-resistant GAD is therefore a high public and mental health priority (7, 9).

Acceptance and Commitment Therapy (ACT; (10)) is a novel alternative to conventional psychotherapy that may be particularly suitable for older adults with treatment-resistant GAD who often experience comorbid chronic physical and mental health conditions and multiple losses (e.g. to health, family,

social network, role/identity, and financial status). It is a behavioural therapy that aims to: i) encourage people to be more willing to experience uncomfortable thoughts, feelings and sensations rather than trying to control, eliminate or avoid them (Acceptance); and ii) improve function through increased engagement in meaningful activities that are consistent with longer-term goals and values (i.e. what is important and matters to them; Commitment) (10). ACT has been shown to be as effective as CBT and applied relaxation in the treatment of GAD (11, 12), though no specific study has examined whether ACT is beneficial in older adults with treatment-resistant GAD. Wetherell et al. (2011) found that ACT is feasible for use with older adults with GAD and effective at reducing worry, though the effects observed were significantly smaller than those reported in younger adults. Wetherell and colleagues concluded that the intervention requires adaptation to ensure its relevance and acceptability to older adults (13).

Our study used qualitative methods in accordance with Medical Research Council guidelines (14) to optimise the relevance, acceptability and feasibility of ACT for older adults with treatment-resistant GAD. We consider it part of a new era of intervention development studies in which we combine rigour and transparency to develop an intervention that successfully impacts on health care. Thus, we open the “black box” of intervention development to address the challenges posed by multi-morbidity and ageing populations that appear resistant to change (15).

Methods

Study Design

A person-centred approach was used to ground the development of the intervention in the perspectives and lives of the older adults for whom it was intended (16). Systematic, qualitative methods were used alongside patient and public involvement (PPI) to build upon an ACT protocol previously piloted with older people with GAD, but not specifically those who were treatment-

resistant (13). Stage 1 (intervention planning) investigated intervention preferences and priorities, relevant experiences and barriers and enablers to engaging with talking therapy. Stage 2 (intervention design and development) involved formulating design objectives, and intervention features relevant to each objective, for the ACT therapy manual. A summary of core ACT processes relevant to older people with treatment-resistant GAD (Appendix 1) and the person-based activities involved in the intervention development (Appendix 2) are available as supplementary data. Ethical approval was granted by the London - Camberwell St Giles Research Ethics Committee (17/LO/0704).

Data collection & analysis

Stage 1 – Intervention planning

Semi-structured interviews were conducted between July-September 2017 with 15 older adults with GAD who had previously been offered other psychotherapies and 36 healthcare clinicians across professions and settings (Table 1). Recruitment was purposive to recruit older people with differing length and severity of illnesses, living situation, sex and age group across inner city (London) and rural (Oxfordshire) settings to provide access to a range of perspectives. Older adults were recruited via secondary care settings (n=8) and primary care services (n=2) or via self-referrals following the distribution of study posters and leaflets to local day centres and activity groups for older adults (n=5). Informed consent was obtained from all participants.

[Table 1: Participant demographics]

Clinicians from Community Mental Health Teams (CMHTs) and GP surgeries identified and approached potentially eligible older adults and sought verbal consent for researchers to contact them. A researcher (KK) contacted prospective participants to discuss the Patient Information Sheet, answer

questions about the study and schedule a screening appointment. Adults were eligible for inclusion if aged over 65, had a primary diagnosis of GAD (17) and had failed to respond to medication and/or psychological therapy in primary and/or secondary care. Stage 1 interviews used a topic guide flexibly to identify relevant issues specific to this population that the intervention would need to consider, including individuals' attitudes towards their condition, its perceived impact upon their lives, experiences of medication and psychological therapies, and views on which elements of ACT interventions might be suitable or relevant for older adults. The guide was revised iteratively to allow the main concerns of participants to be explored. Face-to-face interviews were conducted in participants' homes (n=9), the care setting in which they were recruited (n=4) or at the lead university (n=2), according to participant preference. Interviews were recorded and transcribed verbatim with contextual notes and reflections documented in an analytical diary.

Thirty-one phone interviews were conducted with healthcare professionals to examine a range of experiences of working with older adults with GAD who seem not to respond adequately to treatment. This included GPs and psychologists, psychiatrists, community psychiatric nurses and occupational therapists in primary and secondary care. Recruitment continued until saturation of data was achieved. The research was advertised nationally via online forums and secondary care services for older adults. Interested participants contacted the research team and participated in a 30-40 minute telephone interview investigating the challenges of supporting older adults with GAD and how an intervention could be made more attractive, persuasive and feasible to implement. Views and recommendations were recorded in detailed research notes. A 1-hour group interview comprising 5 academic clinicians from the a Mental Health of Older Adults research group at University College London, the lead institution for this research, was also conducted.

The framework approach (18) was used to facilitate analysis within and between individual cases and groups of participants. One researcher (KK) conducted the interviews and focus group, listened to all

recordings and repeatedly read the transcripts and research notes to familiarise herself with the data. Key issues, recurrent themes and interpretations were noted and discussed in supervision and at research team meetings. Three transcripts were reviewed by two additional researchers (VL, RG) to help identify alternative viewpoints. A descriptive theoretical framework of key beliefs about GAD, coping strategies and therapy specific to this group and considered relevant to the intervention was developed by consensus and used to index subsequent transcripts. Data were then charted into matrices to help map and interpret the dataset as a whole: comparisons were made across themes and participants to help synthesise the findings.

Stage 2 – Intervention design and development

Themes relating to the specific needs, issues and challenges of people with GAD were developed into recommendations for optimising ACT therapy and presented to the Service User Advisory Group (SUAG), comprising 5 older adults with lived experience of treatment-resistant GAD, for discussion. Views on the salience and feasibility of the proposed intervention components, together with discussions with 8 academic clinicians, involved as co-applicants/collaborators in the research, informed the guiding principles and design of the ACT therapy manual.

Further face-to-face semi-structured interviews with the 15 older adults with GAD who had completed interviews in Stage 1 were conducted using ‘think aloud’ techniques (19). Such techniques enable researchers to observe people using an intervention while saying their thoughts out loud. A written summary of the key features of the manualised intervention was mailed to participants in advance of the interview to help elicit their views. Participants were also asked to voice their thoughts during and after a sample of intervention exercises. We then iteratively modified the intervention features within the ACT therapy manual to improve acceptability, via further feedback from 8 clinical academics and 15 research therapists involved in providing management and therapy for the study respectively. This work was supported by the NIHR Health Technology Assessment (HTA) Programme (ref: 15/161/05).

Findings

Stage 1

Interviews with older adults and healthcare professionals identified key issues, needs and challenges that would need to be considered when developing the intervention. These were categorised according to four key themes: “Expert in one’s own condition”, “Deep seated coping strategies”, “Expert in therapy” and “Support with implementation” (See Table 2). Data are presented across the participant groups with similarities and discrepancies highlighted where relevant.

[Table 2: Key themes identified in Stage 1]

1. Expert in one’s own condition

The majority of older adults with GAD presented as experts in their own condition, recounting deep seated views of self, contributing factors, circumstances that trigger their anxiety, and the futility of this response (see Table 2, Theme 1). Many described themselves as having a propensity to worry, with anxiety being an inherent part of who they are. Worry was often intertwined with negative aspects of ageing, including pain, lack of mobility, poor health and bereavement. There was consensus among healthcare professionals that physical health problems contributed to GAD, were difficult to resolve and limited older adults’ ability to attend and concentrate in therapy sessions. Yet a large proportion of professionals were also critical of what they viewed as “entrenched negativity” whereby identifying worrying as part of one’s sense of self could prevent individuals from taking ownership of their condition or assuming a role in effecting change. It was suggested that this led to an overreliance on services and, subsequently, a need to socialise older adults to a therapeutic model that is fully collaborative and directed towards change. Nevertheless, healthcare professionals recognised that older adults had unrivalled knowledge of their condition, which was further evidenced by the detailed

accounts that individuals gave of the circumstances and thoughts that triggered their anxiety, such as the health and wellbeing of their children, social interaction, travelling and finances. Many older adults recognized that worrying was to a large extent unnecessary and, to an even greater degree, futile, yet some healthcare professionals felt that older adults with treatment-resistant GAD required a deeper understanding of how unproductive these existing thinking patterns could be.

2. Deep seated coping strategies

Older adults had established deep seated coping strategies over the course of their illness (see Table 2, Theme 2). Almost all commented, often with regret, that they had come to avoid most social contact and activities as they were viewed as a major cause of anxiety. Those who did continue to meet with friends described how they circumvented particularly uncomfortable aspects of the social situation (e.g. by getting a taxi to a friend's house to avoid public transport) or concealed their anxiety. Putting on a "brave face" presented as a source of pride and pain. Another common strategy was to plan for the worst through anticipating all eventualities. Two older women reflected that these efforts to exercise control over the events and people in their lives had been detrimental to their relationships. Healthcare professionals acknowledged the challenge of addressing these entrenched behaviours, which were widely recognised, suggesting that they necessitated longer and more "intensive" therapy.

3. Expert in therapy

Participants had accumulated considerable experience of talking therapies, most often CBT (see Table 2, Theme 3). Therapies were criticised for being "too academic" and for relying on short-term courses and inexperienced therapists who lacked the life experience to truly understand their problems. One woman indicated her discomfort at reflecting on her behaviour during therapy, while another suggested that she found it difficult to change how she thinks at this stage in her life. There was evident frustration among healthcare professionals in primary and secondary care as they described

the difficulty of engaging these older adults in thinking about their anxieties. One GP suggested that years of medication had created a distance between older adults with GAD and their distress, and eroded individuals' awareness of their internal states. Older adults themselves were ambivalent about medication: most felt it had the potential to ameliorate anxiety in some cases, but had side effects and, like talking therapy, did not eliminate underlying problems. A handful of participants articulated a desire for a "magic pill" that would remove their distress. Healthcare professionals saw this wish for a cure as further evidence of older adults' unwillingness to assume responsibility for change themselves, leading to an over-reliance on services and an expectation that therapists should provide treatment without recognising the need for active participation on the older person's part. Healthcare professionals stressed the importance of reaching realistic shared goals for therapy and of adopting a collaborative approach. It was striking that almost all older adults highlighted the qualities of the therapist as the most important aspect of therapy. Participants indicated that empathy was a prerequisite for any therapeutic alliance, with value placed on therapists who did not make judgements but listened carefully to understand their experience.

4. Support with intervention

It was widely recognised among older adults that implementing relaxation techniques in their lives required practice and commitment (see Table 2, Theme 4). Most were receptive to this in principle, but felt they lacked sufficient discipline in practice. Many were sceptical of the ability of talking therapies to produce a sustained benefit, but nonetheless were forthcoming in contributing suggestions to achieve this. For example, it was thought that meditation could be supported using audio tapes, videos and phone reminders. However, input from others via weekly groups, brief follow-up contact with healthcare professionals and family encouragement were considered necessary to embed this practice within their lives. Healthcare professionals routinely advocated using handouts and engaging family members so that they could fully understand and support this work. There was a consensus among professionals that interventions needed to be flexible, offering a range of activities

that could be practiced at home with the support of handouts and, some suggested, occasional home visits.

Stage 2

Themes were developed into guiding principles for therapy (see Table 3) in consultation with the Service User Advisory Group (SUAG) and modified in response to follow-up interviews with older adults, and via further discussion with experts (clinical academics and therapists involved in the study). The key features for optimising an ACT intervention for older adults with treatment-resistant GAD are described below. For concision we have opted to present the final outputs from the process of intervention design and development rather than itemise the incremental changes.

[Table 3: Guiding principles for ACT for older adults with treatment-resistant GAD]

1. Expert in one's own condition

1.1. Examine beliefs around "self as worrier"

Older adults acknowledged that exploring beliefs around the view of the self as a worrier may be of benefit, including evaluating how this might help or hinder individuals from living the life they want. Clinical academics felt that the perceived inevitability of worrying in the context of age, pain, lack of mobility, poor health and bereavement should be discussed as this could develop into a negative self-stereotype and deter individuals from attempting to change their behaviour. Similarly, older adults could be helped to understand that worrying is not only futile but could limit their activities beyond those imposed by any chronic illness or functional impairment.

1.2. Listening and respecting values and enduring concerns

Older adults were unequivocal in their view that therapy must respect their life-long knowledge and experience. All stakeholders agreed that this information can be used to personalise activities and to support therapists in using metaphors and exercises, as is typical in ACT, that are relevant and meaningful to individual service users.

2. Deep seated coping strategies

2.1 Evaluate the costs of deep seated coping strategies

Though not raised in interviews with older adults, members of the SUAG agreed that therapy should examine the consequences of the coping behaviours that older adults have developed over many years to help them control their worrying. This should include raising awareness of the costs of trying to control their worries (e.g. through avoidance behaviour), including the emotional toll of concealing anxiety and of trying to control situations, people and events. Experts felt therapy should consider the extent to which curtailing social contact and activities had caused individuals to lose contact with the things that gave meaning to their life (i.e. their values).

2.2. Consider any useful functions of avoidance behaviour

Older adults felt it should not be assumed that all control and avoidance behaviour is problematic; older adults are experts in living with their own condition and certain behaviours may serve a useful function. Clinicians subsequently supported this point.

3. Expert in therapy

3.1 Communicate the goal of ACT Therapy

Older adults liked that ACT does not involve challenging thoughts around losses that may be realistic, and all saw the benefit of focussing on remaining resources and living life in accordance with deeply

held values. Members of the SUAG stressed that the aim of ACT should be clearly communicated and differentiated from the aim of CBT with which older adults may be more familiar. It should be stressed that the purpose of ACT is not to fix problems or change thoughts and feelings.

3.2. Helping older adults to recognise and discuss thoughts and feelings

Regular mindfulness exercises were suggested by academic clinicians and endorsed by older adults as a way to develop skills in recognising and describing their thoughts and their feelings. It was thought that the use of concrete metaphors and experiential exercises (i.e. those using visual or physical props) could make concepts easier to understand for some, but not others, with a proportion of older adults expressing a preference for “speaking plainly”.

3.3. Working in collaboration

There was consensus among older people and clinicians that therapy should be positioned as a collaborative partnership between the therapist and the older adult. Older adults continued to prioritise an empathic approach and therapists expressed confidence in validating individuals’ experiences and emotions. However, members of the SUAG acknowledged that therapists should not be expected to “fix” the individual or to provide solutions. Rather, individuals must be active in pursuing value-based goals.

4. Support with implementation

4.1. Provide strategies and materials to support implementation

All agreed that multiple strategies should be used to help older adults apply therapeutic principles in their lives. As it is common that older adults experience mild age-related cognitive changes, adaptations should be made to accommodate for potential changes in memory, attention and processing speed. Older adults responded positively to the following practices and suggestions:

repetition of key phases throughout the intervention, working at a slower pace where necessary, providing a summary of the sessions as a reminder of what has been discussed, and asking the service user to discuss their understanding of weekly practice tasks in their own words, to check that what has been set by the therapist has been understood.

4.2. Work with close family and friends

Older adults thought that the aim of ACT should be clearly communicated to all those involved in the health and welfare of the client at the start of therapy. Partners, family members or close friends could contribute to the account of individual's difficulties and help them to work through potential barriers to behavioural change. However, members of the SUAG cautioned that many would not want to burden their children by involving them in this way.

Discussion

The findings suggest that ACT psychopathological processes, as illustrated in Appendix 1, can be identified in people with treatment-resistant GAD, underlining the potential suitability of using an ACT approach with this population. For example, participants appeared to have difficulty in separating themselves from the literal meaning of their thoughts (cognitive fusion), frequently telling themselves they are worriers (self-as-content) and placing limits on their behaviour (lack of committed action). They described avoided situations that make them feel uncomfortable and attempts to try to control their thoughts and emotions (experiential avoidance). These approaches have been associated with distress in older adults (20) and participants confirmed that they exert an emotional burden. As posited elsewhere (21), the goal of ACT to live life in accordance with deeply held values, despite the many challenges they may experience, seemed to resonate with this group who had experienced little success with control-orientated treatment strategies such as CBT in the past.

The findings also highlight the unique experience of older adults with treatment-resistant GAD and its important implications for how ACT is applied with this group. From the outset, attention should be given to validating and accommodating the individual's knowledge and experience in therapy, differentiating the aims of ACT from CBT, using mindfulness to support discussion of thoughts and feelings, and therapeutic strategies to compensate for age-related cognitive changes. Notably not all older adults responded positively to the use of metaphors and experiential exercises, key tools within ACT for communicating abstract concepts. This reinforces previous suggestions that these techniques must be used thoughtfully and tailored to the client's language and life experience (22). Participants also cautioned against assuming that all efforts to control unwanted thoughts and experiences are unhelpful. Brock et al. (2015) elaborates on this point, suggesting that there may be times when avoiding certain emotional experiences is the functional thing to do and therapists should identify the role that avoidance plays in the client's day-to-day life. The concept of workability, that is, how well a strategy is helping a person to live their life in accordance with their values, is key here.

There was a large overlap in the views of older adults and healthcare professionals. Notably, despite expressing optimism around the principles of ACT, both groups had feelings of hopelessness with respect to change. One of the strongest themes to emerge in the data was the idea of "entrenched negativity", requiring an early focus on cognitive fusion in relation to negative attitudes about ageing and the individual's sense of self. However, healthcare professionals felt this also necessitated a change in how older adults with treatment-resistant GAD approach therapy. Positioning ACT as a collaborative partnership between clients and therapists and exploring older adults' expectations around therapy should support this. Serfaty et al. (2017) noted that there is a risk that therapists delivering ACT will be drawn into the content of their clients' experiences and a wish to eliminate clients' suffering. Therapists are advised to validate the experience, not the content, and to help clients reflect on how the situation could be changed (23). The client-therapist relationship in ACT has been described as "...strong, open, accepting, mutual, respectful and loving" (24), which is accordant

with the emphasis older adults placed on therapists who are interested in understanding their experiences. It is notable that though older adults valued empathy, their comments suggested a desire for more than “just” a passive listener. Finally, healthcare professionals may also need to examine their own beliefs around working with older adults with treatment-resistant GAD that might impede therapeutic progress. Acquiring experience of an intervention that works with older adults with treatment-resistant GAD is likely to inculcate therapeutic optimism in service users and clinicians alike.

It is important to note that our sample of older adults reported high levels of academic achievement, few would be categorised as ‘older old’ (i.e. in their 80’s) and all identified themselves as white British. Healthcare professionals, SUAG members and academic clinicians were encouraged to reflect on experiences across cultural and socioeconomic groups, but it cannot be assumed that our findings apply to this broader population. Furthermore, the study does not address the attitudes of family carers towards participating in therapy, as advocated by healthcare professionals and some, but not all older adults in this study. Telephone conversations with healthcare professionals were not audio recorded (instead, comprehensive notes were taken with key quotes recorded verbatim), and we recognise this as a limitation of the study. However, this can be balanced against the insights gained from the large sample size and the resultant opportunities to verify and amend interpretations of the data. Our commitment to understanding and interweaving the experiences of service users and staff is consistent with experience-based co-design (25) and we recognise that additional benefit may have been gained by bringing stakeholders together to jointly reflect on their shared experiences.

Conclusion

The aim of this article was twofold. Firstly, to demonstrate the value of adopting an iterative, person-centred approach in developing an intervention that is fit for purpose. We applied rigorous methods, triangulating the perspectives of older adults and healthcare professionals and examining alternative explanations using analytical diaries, multiple coding exercises, supervision and

discussions with service users and experts. Secondly, in describing the decisions and processes involved in developing ACT for older adults with treatment-resistant GAD, we aimed to lay the foundations for a therapeutic intervention that can be built upon and replicated in future research. This is an important step forward designed to maximise the likelihood of a successful outcome when the intervention is subsequently evaluated for acceptability and clinical effectiveness.

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Table 1: Characteristics of participants

Older adults interviews**Participants, n (%)****(n=15)**

Gender	Male	4 (27%)
	Female	11 (73%)
Ethnicity	White or White British	15 (100%)
Age	60-69	5 (33%)
	70-79	8 (53%)
	80-89	2 (13%)
Marital Status	Married	7 (47%)
	Divorced	2 (13%)
	Single	1 (7%)
	Co-habiting	1 (7%)
	Widowed	4 (27%)
Education	No qualifications	2 (13%)
	0 levels/GCE/GCSEs	3 (20%)
	A levels	2 (13%)
	Degree	7 (47%)
	PhD/Doctorate	1 (7%)

Healthcare Professionals**interviews (n=31)**

Job Title	Clinical/Counselling Psychologist	12 (38%)
	CBT therapist	1 (3%)
	Occupational Therapist	4 (13%)
	GP	4 (13%)

	Psychiatrist	7 (23%)
	Nurse	3(10%)
Gender	Male	6 (19%)
	Female	25 (81%)
Service level	Primary care	5 (16%)
	Secondary care	25 (84%)
	Tertiary care	1 (3%)

Academic Clinicians Focus

Group (n=5)

Job Title	Clinical/Counselling Psychologist	1 (20%)
	Psychiatrist	3 (60%)
	Nurse	1 (20%)
Gender	Male	3 (60%)
	Female	2 (40%)

Table 2: Key themes identified in Stage 1

	Views of older adults	Views of Healthcare Professionals
1. Expert in one's own condition		
Deep seated view of self	Worrying as a part of oneself <i>"I've always had the potential for a worrying mind" (P110, Female, 79)</i>	Identifying worrying as a part of oneself can prevent change <i>"It's just part of their personality; they say they can't help it" (Occupational Therapist, secondary care)</i> <i>"They've been a worrier all their life so found it harder to engage with the cognitive side of CBT" (Community Psychiatric Nurse, secondary care)</i>
Life events and co-morbidity	Worry intertwined with poor health and negative aspects of aging <i>"The anxiety is really tied up with being on my own, I think." (P07, Male, 72)</i> <i>"I get very concerned about, very often health but it can be other things, I don't like uncertainty, I find that they recur and I'm going round and round in circles." (P115)</i> Awareness of triggers and concerns <i>"I worry about my daughter a lot. And I worry about my other daughter I don't see too much. ...just all stupid things all the</i>	Life events and co-morbidity contribute to GAD and are difficult to resolve <i>"There are life issues that can't be solved" (Clinical Psychologist, secondary care)</i> <i>"Tablets won't work if the problem is still social" (GP, primary care)"There are lots of life changes, adjustment and I find making changes harder in this client group" (Clinical Psychologist, secondary care)</i> Cognitive and physical health problems as barriers to engagement

	<p><i>time. What if the lights go off? What if this, what if that? And by the time I finish all of those worries I feel so alone and frightened.” (P114, Female, 87)</i></p>	<p><i>“Back pain interfered in sessions” (Clinical Psychologist, secondary care)</i></p> <p><i>“CBT didn’t help as she didn’t engage due to physical mobility” (Clinical Psychologist, secondary care)</i></p>
<p>Futility of worrying</p>	<p><i>Recognition of futility of worrying</i></p> <p><i>“I’ve spent a lot of time worrying disproportionately about things that aren’t worth worrying about or may never happen.” (P101, Male, 72)</i></p>	<p><i>Need to promote understanding of unproductive thinking patterns</i></p> <p><i>“Explain how unproductive their thinking patterns have been, add this to the psycho-education section.” (Occupational Therapist, secondary care)</i></p>
<p>2. Deep seated coping strategies</p>		

<p>Established coping strategies including concealing anxieties, avoidance, and controlling behaviour</p>	<p>Brave face</p> <p><i>"I don't like it to show so I've always tried to hide it. Always, since I was small."</i></p> <p><i>(P106, Female, 67))</i></p> <p><i>"No, I'm able to cover it up...I don't think anybody else except my wife knew about it."</i> (P115, Male, 82)</p> <p>Avoid activities / social situations</p> <p><i>"I think I'm pretty good, actually, at avoiding the things that cause me anxiety. And, yes, I think I am...I can get taxis if I need. And I avoid being involved with things that are difficult journeys and where the only way I could get there is driving. Yes, so I suppose avoidance is my primary, you know, what's the word? Strategy."</i> (P110, Female, 79)</p> <p>Efforts to exert control</p> <p><i>"I was more controlling than I needed to be, with children, again, because of worrying about what might happen."</i></p> <p><i>(P110, Female, 79)</i></p>	<p>Entrenched behaviours present challenges to therapy</p> <p><i>"A [learnt] helplessness- people not having an ownership of their illness and therefore their role (in bringing about change)"</i></p> <p><i>(Psychiatrist, secondary care)</i></p> <p>Requires more "intense" therapy</p> <p><i>"6-8 or 8-12 [sessions] probably longer term needed with older adults to shift patterns and allow for practice and set new habits"</i>(Occupational Therapist, secondary care)</p> <p><i>"They need individual plans and longer than 6 weeks of treatment"</i> (Counselling Psychologist, secondary care)</p>
<p>3. Expert in therapy</p>		

<p>Talking therapy ineffective</p>	<p>CBT inadequate</p> <p><i>"I think it (CBT) probably is for people with problems that, fresh problems or younger mind. You know, people that didn't, they are not so intense" (P103, Female, 73)</i></p>	<p>Failure to engage with therapy</p> <p><i>"This man was reluctant to engage with psychological therapy. He attended but he never brought any ideas, he never did the homework" (Clinical Psychologist, secondary care)</i></p> <p><i>"A lot of medication over the years that has created distance between them and their distress - so hard to engage" (Psychiatrist, secondary care)</i></p> <p><i>"[Clients] being too quick to judge therapy and giving up" (Psychiatrist, secondary care)</i></p>
<p>Search for a "magic pill"</p>	<p>Desire for a cure</p> <p><i>"I find it very difficult in any therapy to accept what's going on in my life. That would be very hard to accept. It would have to be some kind of marvellous therapy that you could say I'm going to accept all of these things and get on with it..." (P114, Female, 87)</i></p>	<p>Importance of shared, realistic goals and transparency</p> <p><i>"Tell them the truth that there is no 'magic pill'"(GP, Primary care)</i></p> <p><i>"Giving a clear message in the beginning of therapy about the potential of change" (Clinical Psychologist, primary care)</i></p> <p>Unwillingness to change behaviour</p>

		<i>"There was an unwillingness to change his behaviour or bring any ideas about how to change his behaviour"</i>
Desire for an empathic listener	<p>Therapy requires an empathic listener</p> <p><i>"I think it's by far the most important thing, the therapist, far, far away it's an order of magnitude different to anything else...The person is sympathetic but not sympathetic in a sickly sweet sympathetic but is, you know, doing their honest best to understand your problems and to help you face them" (P101, Male, 72)</i></p> <p><i>"Somebody you can trust, somebody that doesn't judge you, they understand you, they are there to help you and give you advice, you know, even if they don't give you direct advice, they give in a way that you understand what to do. (P103, Female, 73)</i></p>	<p>Collaborative approach involving active participation of therapist and older adult</p> <p><i>"I try to work with them and understand and think about all the aspects. What medication would be best? It's important to think about the range of things available and explain that all these things are treatment not just the tablet." (Psychiatrist, Secondary Care)</i></p> <p><i>"You need to see them a minimum of once a week to help build up therapeutic relationship and to build routine structure and expectations about their role and mine." (Clinical Psychologist, secondary care)</i></p>
4. Support with implementation		

Support to practice skills	Tools to support implementation <i>"It requires... you'll say right I've got to do this, I'm going to do this and then so, you know, for a few days you do it. And then, you know, you have a bad day and lots of things going wrong and you're dealing with phone calls and then it all slips away again...I think regular practice is good and anything which encourages regular practice is good...When I try and do this meditation I use CDs that I got as part of the course and I think that's good."</i> (P101, Male, 72)	Tools to support implementation <i>"Giving handouts can help. The lady I spoke about was still reading the information. Giving a folder can help"</i> (Psychiatrist, secondary care) <i>"[For] loss of sight, big lettered documents, bright colours, ask which they can't see well."</i> (Nurse, secondary care)
Family and group support	Peer support <i>"If you've got a group and more people it would be better because you commit [to therapy]. As far as I am concerned I wouldn't like to let the people down, so if I said this group of people meet to do this, you've got to come. I will do it because I wouldn't like the people let down."</i> (P103, Female, 73) Family involvement	Peer support <i>"Group sessions that illustrates that its worked - so others can see the effect, so have patients help each other"</i> (Counselling Psychologist, primary care) Family involvement <i>"Having family there in consultations"</i> (Clinical Psychologist, secondary care)

	<p><i>"Somebody would have to remind me to do it if I had a problem, or, you know, set an alarm clock on your phone, or whatever, or a partner saying, isn't it time you sat down and did your practice?" (P104, Female, 65)</i></p>	
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Table 3: Guiding principles for ACT for older adults with treatment-resistant GAD

Key issue	Design objectives that address each key issue	Key intervention features relevant to each design objective
Expert in one's own condition	<ul style="list-style-type: none"> Examine beliefs around "self as a worrier" 	<ul style="list-style-type: none"> Help individuals to consider how view of self might influence the life they are living Explore alternative ways of holding views about the self lightly in order to help people move towards the things that are important and matter to them
	<ul style="list-style-type: none"> Listening and respecting values and enduring concerns 	<ul style="list-style-type: none"> Early focus on individual's values and behaving in line with those values Use metaphors, experiential exercises and questions that relate to the service user and are easy to understand Importance of therapeutic alliance (e.g. empathy, non-judgemental)
	<ul style="list-style-type: none"> Address "entrenched negativity" 	<ul style="list-style-type: none"> Need to socialise older adults to a therapeutic model that is fully collaborative and directed towards change

Deep seated coping strategies	<ul style="list-style-type: none"> • Examine strategies used to cope with worry • Explore alternative coping strategies 	<ul style="list-style-type: none"> • Validate desire for a “magic pill” • Raise awareness of costs of avoidance behaviour • Consider any useful functions of avoidance behaviour • Encourage willingness to experience uncomfortable thoughts and feelings in order to help people move towards the things that are important and matter to them • Focus on mindfulness (e.g. in order to increase awareness of internal states)
Expert in therapy	<ul style="list-style-type: none"> • Promote confidence in ACT • Support older adults in discussing thoughts and feelings • Offer alternative to a cure 	<ul style="list-style-type: none"> • Provide clear rationale for ACT and how it relates to individuals • Differentiate aim of ACT from CBT (e.g. not about changing thoughts) • Utilise a range of metaphors and experiential exercises that can be adapted to individuals and practiced at home • Emphasis on working collaboratively and active participation in therapy

Support with implementation	<ul style="list-style-type: none"> • Provide scaffolding to support implementation 	<ul style="list-style-type: none"> • Provide strategies and materials to support implementation • Adapt for cognitive changes e.g. difficulties with attention • Work with close family and friends and enlist support from others where necessary • Emphasis on speaking plainly
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Supplementary data

Appendix 1: Core psychological processes relevant to older people with treatment-resistant GAD

Psychological processes that ACT aims to reduce	Examples of what older people with treatment-resistant GAD might say or do illustrating the psychological processes that ACT aims to reduce	Psychological processes that ACT aims to develop
<i>Experiential avoidance</i> : Trying to avoid, get rid of or change the frequency or form of unwanted internal experiences (e.g. thoughts, images, memories, emotions, physical sensations).	"I don't want to feel anxious", "I just want a pill to take it all away", try to stop worries or distract themselves, over-engage in activities, use alcohol or drugs, seek reassurance, avoid situations, engage in excessive planning	<i>Acceptance</i> : Reducing avoidance of or opening up to unwanted internal experiences (when this might be a barrier to life enriching activity) so that one can do what matters to oneself.
<i>Cognitive fusion</i> : Getting hooked by or fused with negative or unhelpful thoughts, images or memories, or acting as if they are literally true.	"Worrying shows that I care", "I can't cope", try to 'think their way out of internal problems', act as if thoughts are true (e.g. buy into reasons their minds give them about why they can't do XYZ)	<i>Defusion</i> : Reducing the degree to which one is caught up in negative or unhelpful thoughts, images or memories by stepping back from them and seeing thoughts just as thoughts.
<i>Dominance of past and future</i> : Being stuck in one's head, ruminating about the past or worrying about the future.	Engage in excessive worrying (e.g. "What if...?"), show a lack of awareness of internal experiences (e.g. thoughts, feelings and sensations)	<i>Contact with the present moment</i> : Reducing the amount of time one is stuck in one's head by increasing awareness in the present moment (i.e. the here and now).
<i>Self-as-content or attachment to the conceptualised self</i> : Being caught up in or attached to the stories that one tells about oneself, or seeing oneself as the content of one's internal experiences.	"I've always been a worrier", "I'm too old to change...I'm not going to change now", adopt a particular role (e.g. the role of a 'worrier'), act as if thoughts are true	<i>Self-as-context</i> : Seeing oneself as distinct from the content of one's internal experiences (e.g. seeing oneself as separate from one's thoughts rather than being defined by them).
<i>Lack of clarity or loss of contact with values</i> : Losing connection with or not knowing what really matters to oneself (i.e. what is important and meaningful).	Unable to describe what matters to them, apart from feeling better (e.g. "I just want to feel better", "There's no point...")	<i>Values</i> : Knowing what really matters to oneself and the type of person one wants to be in one's life.
<i>Inaction, impulsivity or avoidant persistence</i> : Failing to act in accordance with what	Living a life that is unsatisfying and narrow (e.g. due to fear of the unknown) and is in service	<i>Committed action</i> : Committing to doing what really matters (i.e. engaging in personally

really matters to oneself through avoidance or inaction.	of avoidance rather than their values	meaningful activities that support what one values).
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Appendix 2: Person-based activities involved in intervention development

Stage of intervention development and evaluation	Person-based intervention development activities
1. Intervention planning	<p>1. Qualitative interviews with 15 older adults with GAD and 31 healthcare professionals and group interview with 5 academic clinicians to elicit views on intervention preferences and priorities (including relevant previous experience, barriers and enablers to engaging with talking therapy)</p>
2. Intervention design and development	<p>2. Consultation with Service User Advisory Group, clinical academics involved in the management of the study, and clinical experts involved in providing supervision of therapy for the study to agree guiding principles, comprising:</p> <ul style="list-style-type: none"> a. Key intervention design objectives b. Key intervention features to achieve each design objective <p>3. Semi-structured interviews with 15 older adults with GAD who had completed interviews in Stage 1 to elicit and observe reactions to each intervention element and refine guiding principles, iteratively modifying the intervention to optimise acceptability and feasibility</p> <p>4. Intervention features refined in discussion with Clinical Academics and Research Therapists</p>

